

Material Testing Results

Robert

"Equipment for Grouting Since 1969"

805 E. 31st Street, P.O. Box 1140 **Date**: 8/17/2000

LaGrange Park, Illinois 60526 E-Mail: info@chemgrout.com

Manufacturer: Lyons Mfg, Inc.

8900 Forney Rd **Phone:** 214-381-8100

Dallas, TX 75227-8158 Fax: 214-381-8100

Contact:

Material: Super Flow Rock Lot # N/A

Material Application: anchoring cement

Mfg. Plant: Dallas, TX Std. Bag Weight: 45 #

Testing Conditions: Outside Temperature: 75.3*F Humidity: 60%

Equipment Used: Model: CG570 Pump: 2TJ6 Progressing Cavity

Mixer: Paddle Power: Hydraulic

Std. Mix Ratios: 3.5 quarts per bag Water Temp: 77.6 *F

Batching Method: Quantity Material: 135 lbs. Quantity Water: 22 lbs

Mixing Time: 30-40 Seconds Batch Temp: 86.4 *F

Specific Gravity: SG = 2.14 **Flow Cone** N/A Seconds

Pumping Method: Recirculated through hose, recorded pressures at various flow rates.

Flow Rate/Pressure:	Flow Rate	Pressure	Flow Rate	Pressure
Hose (1 1/4" X 50')	3.55 GPM	40 PSI	GPM	PSI
Hose (1 1/4" X 50')	5.27 GPM	40 PSI	GPM	PSI
Hose (1 1/4" X 50')	7.63 GPM	65 PSI	GPM	PSI
Hose (1 1/4" X 50')	10.0 GPM	90 PSI	GPM	PSI
Hose (1 1/4" X 50')	12.04 GPM	120 PSI	GPM	PSI
Hose (1 1/4" X 50')	13.76 GPM	135 PSI	GPM	PSI
Hose (1 1/4" X 50')	16.18 GPM	140 PSI	GPM	PSI
Hose (1 1/4" X 50')	18.28 GPM	140 PSI	GPM	PSI
Hose (1 1/4" X 50')	20.48 GPM	140 PSI	GPM	PSI
Hose (1 1/4" X 50')	22.79 GPM	140 PSI	GPM	PSI

Observations: Fast setting anchor cememtn, gritty, pumped okay

Started setting in hopper after 5 minutes--got a little thinner at high HP

Results: ChemGrout, Inc. rates the pumpability of this product as a "7" out of 10, with

10 being the easiest. ChemGrout, Inc. recommends the 050 pump or higher.